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10/050,083	01/14/2002	Paul Harry Abbott	GB920010052US1	6326

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EXAMINER

WILLIAMS, JEFFERY L

ART UNIT PAPER NUMBER

2137

DATE MAILED: 10/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/050,083

Applicant(s)

ABBOTT ET AL.

Examiner

Jeffery Williams

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 July 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 July 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

AD

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DETAILED ACTION

This action is in response to the communication filed on 7/29/05.

All objections and rejections not set forth below have been withdrawn.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 3, 4, 9, and 10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 3, 4, 9, and 10 each recite the limitation "the internet" in lines 4, 6, 4, and 6, respectively. There is insufficient antecedent basis for this limitation in the claim as no prior mention has been made of an internet in any of the parent claims.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 5 – 8, and 11 – 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over McManis, “System and Method for Protecting Use of Dynamically Linked Executable Modules”, U.S. Patent 5,757,914.

Regarding claim 1, McManis discloses:

a primary library file, the primary library file having a digital signature (McManis, col. 1, line 65 – col. 2, line 11; col. 1, lines 48-63).

a loader program arranged to obtain a digital signature key and further arranged to load the primary library file (McManis, fig. 1, elems. 110, 112; col. 2, lines 22 – 37, 40-43). The verifier is a “loader program” as it enables the loading of each program module, including the primary program module.

and a plurality of secondary files arranged to be referenced by the primary library file, each of the plurality of secondary files having a digital signature (McManis, fig. 1, elems. 116, 118, 120; col. 2, lines 1,2; col. 3, lines 17-21).

McManis shows the operation of his system in a slice in time (McManis, col. 2, lines 53-55). He does not disclose the details regarding the initialization of his system, but instead shows how his loader program enables the loading of the primary and secondary files via the verification of digital signatures. Consequently, McManis does

1 not disclose an initial digital signature verification of the primary file by the loader
2 program, an initial loading of the primary file by the loader program.

3 However, McManis discloses that every file, including the primary file, contains a
4 digital signature and that the digital signature is necessary to verify the authenticity of
5 every called file before that file is loaded (McManis, col. 1, line 65 – col. 2, line 44). It
6 would have been obvious to one of ordinary skill in the art to arrange, at the time of
7 initialization, for the loader program to initially verify the digital signature of the primary
8 file and initially load the primary file. This would have been obvious because one of
9 ordinary skill in the art would have been motivated to verify the authenticity of the
10 primary file, as taught by McManis, when the primary file is initially loaded - so as to
11 protect the system's integrity at all times.

12
13 Regarding claim 2, the modification of McManis discloses:

14 *the plurality of files including at least one tertiary file referenced by at least one*
15 *secondary file of the plurality secondary files, wherein after successful verification and*
16 *selective loading of the at least one secondary file, the at least one secondary file is*
17 *arranged to manage the verification and selective loading of the at least one tertiary file*
18 (McManis, fig. 1, elems. 118, 120; col. 3, lines 12-21, 30-37). McManis discloses that
19 each file can contain a plurality of procedure calls to other files, thus a secondary file
20 may call a tertiary file.

21

1 Regarding claim 5, the modification of McManis discloses that all files contain
2 digital signatures so that they may be verified with a digital signature key (McManis, col.
3 2, lines 22-37). McManis further discloses that verifiable files may contain a number of
4 portions, including a methods portion and a data portion. Each portion is verified by a
5 separate digital signature (McManis, col. 4, lines 54-67). Thus, McManis discloses the
6 digital signature key used to verify the file as being a combination of keys. These
7 verifiable files are often authored, maintained, or updated ("administrated") by others
8 ("administrators"), which is why they are linked dynamically during program execution
9 (McManis, col. 1, lines 10-27). Thus, the modification of McManis discloses at least one
10 of the files being an administrator configurable file.

11
12 Regarding claim 6, the modification of McManis does not disclose that the
13 system is a Java Virtual Machine installation. However, the system of McManis,
14 assigned to Sun Microsystems, Inc., is disclosed as being operable on "virtually any
15 type of computer", including architecturally distinct systems such as Sun workstations,
16 IBM compatible computers, and Macintosh computers. It would have been obvious to
17 one of ordinary skill in the art, based upon logical reasoning, to employ a virtual
18 machine installation such as Java in the system of McManis. This would have been
19 obvious because one of ordinary skill in the art would have logically recognized that a
20 virtual machine installation such a Java would allow the system of McManis to be
21 employed on such a diverse and distinct set of architectures.

22

1 Regarding claims 7, 8, 11, and 12, they are the method claims employed by the
2 system claims above, and are rejected by the same reasons.

3
4 Regarding claim 13, it is the computer program claim employed the system
5 claims above, and is rejected by the same reasons.

6 **Claims 3, 4, 9, and 10 are rejected under 35 U.S.C. 103(a) as being**
7 **unpatentable over McManis, "System and Method for Protecting Use of**
8 **Dynamically Linked Executable Modules", U.S. Patent 5,757,914 in view of**
9 **Menezes et al., Handbook of Applied Cryptography.**

10
11 Regarding claim 3, the modification of McManis discloses the use of a public key
12 as a digital signature key (McManis, col. 3, lines 38-50). He does not disclose that the
13 public key is obtained from the internet.

14 Menezes et al. discloses the key management techniques used to share keying
15 material (Menezes et al., pages 543, 544). In public-key systems, entities requiring
16 public keys obtain the public keys via an internet ("inter network") of certification
17 authorities, key servers, and key management facilities (Menezes et al., pages 548-
18 550).

19 It would have been obvious to one of ordinary skill in the art to employ the
20 method Menezes et al. for obtaining public keys via an internet with the system of
21 McManis for using a public digital signature key. This would have been obvious
22 because one of ordinary skill in the art would have been motivated to efficiently utilize

1 system resources by having the public key be obtained from a remote source instead of
2 the program modules themselves generating the public/private key pairs.

3
4 Regarding claim 4, the combination of McManis and Menezes et al. discloses:
5 *the digital signature key being a hidden public key internal to the loader program,*
6 *the loader program being arranged to use the hidden public key the event that a public*
7 *key cannot be obtained via the internet* (McManis, col. 4, lines 7-53). The combination
8 of McManis and Menezes et al. shows that public keys used for digital signature
9 generation would be obtained from an internet. The loader program obtains the public
10 key an inherently stores the key internally (as would be required in order to perform the
11 processing of the digital signatures), thus using the obtained key even if it couldn't be
12 obtained by the loader program from an internet.

13
14 Claims 9 and 10 are the method claims employed by the system claims 3 and 4,
15 and are rejected by the same reasons.

16
17 ***Response to Arguments***

18
19 Applicant's arguments filed 7/29/2005 have been fully considered but they are
20 not persuasive.

21
22 Applicant's argue primarily that:

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1
2 (i) *Applicant asserts there is no ambiguity as there is only one internet and*
3 *that the internet is a well defined term ...Thus, it is respectfully requested that the*
4 *Patent Office withdraw its rejection of claims 3, 4, 9, and 10... (Remarks, page 8, 9).*

5
6 In response, the examiner kindly invites the applicants to review the definitions of
7 "internet" and "Internet" for the proper terminology as is used by one of ordinary skill in
8 the art (see Microsoft Computer Dictionary, 4th ed, attached). The examiner maintains
9 the rejections of claims 3, 4, 9, and 10 under 35 U.S.C. 112, 2 paragraph.

10
11 (ii) *...McManis is limited to the mutual verification by two applications and*
12 *never discloses a loading process. Despite the Patent Office's assertion, McManis's*
13 *verifier is not a "loader program." Just because a software module is able to verify the*
14 *authenticity of an application does not mean that it will also load such application*
15 *(Remarks, page 10, par. 4).*

16 *... Applicant, in response to the above paragraph, again asserts that McManis*
17 *does not disclose loading and does not disclose loading as being part of the verification*
18 *process. McManis does not disclose that the primary file is verified by a loading*
19 *program (Remarks, page 11, par. 3).*

20
21 In response, the examiner invites the applicant to review the applicant's own
22 disclosure.

1 First, respecting the claim language, the applicant claims a “loader program”
2 stating: *wherein the loader program is arranged to verify and **selectively load the***
3 *primary library file **by comparing the obtained digital signature key with the digital***
4 ***signature of the primary library file** ...* (Claim 1, emphasis added). Thus, while the
5 applicant appears to dispute the constitution of a “loader program”, the examiner
6 asserts, for the reasons of record, that the prior art meets the limitations of a “loader
7 program” as claimed.

8 Second, this claim analysis respecting a “loader program”, is clearly supported by
9 the applicant’s own disclosure. The applicant discloses that a “Java launcher” or
10 “program loader” may “load” a primary DLL file. The primary DLL file may “load” a
11 secondary configuration file, such as a policy file. The secondary configuration file may
12 “load” a tertiary configuration file (Specification, page 5, par. 5 – page 6, par. 2). In one
13 aspect, the applicant discloses that it is the **operating system** that loads all such files.
14 On the other hand, the applicant describes the “loader program” as “loading” files via
15 the verification of the digital signatures of the files to be “loaded” (Specification, page 6,
16 par. 3 – page 8, par. 1). Nowhere, however, has the applicant provided a definition of
17 what actually constitutes “loading”. Rather, the applicant has described numerous and
18 very different computer elements (“operating system”, “loader program”, a “java.policy
19 file”) as able to “load” and for performing “loading”. In light of such liberal and broad
20 disclosure by the applicant respecting the terms “load” and “loading”, as well as the
21 claim language, the applicants arguments are unpersuasive.

1 (iii) ... *McManis is not concerned with the basic software but with certain*
2 *called routines and so it not concerned with the initial loading of a base application,*
3 *such as a JVM (Remarks, page 11, par 1). ... McManis would not be directed to the*
4 *verification of a basic Java virtual machine, but at cryptographic routines that might be*
5 *called by the JVM. The second problem McManis addresses concerns the situation*
6 *where there is a desire to limit or prevent use of dynamically linkable modules so as to*
7 *protect trade secrets or provide protection for contractual reasons so McManis would*
8 *also not be directed to verification of a basic Java virtual machine (Remarks, page 11,*
9 *par 3 – page 12).*

11 In response, to applicant's argument that the references fail to show certain
12 features of applicant's invention, it is noted that the features upon which applicant relies
13 (i.e., "verification of a basic Java virtual machine", "the initial loading of a base
14 application, such as a JVM") are not recited in the rejected claim(s). Although the
15 claims are interpreted in light of the specification, limitations from the specification are
16 not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed.
17 Cir. 1993).

19 (iv) ...*McManis does not disclose or suggest that "at least one secondary file*
20 *is arranged to manage the verification and **selective loading** of the at least one tertiary*
21 *file." Thus, it is respectfully submitted that claims 2-6 and 8-12 are allowable for this*
22 *additional reason (Remarks, page 12, par. 5 – page 13).*

1
2 In response, the examiner remarks that if a particular file was loaded, then it was
3 "selected". Furthermore, the Applicant's arguments do not comply with 37 CFR 1.111(c)
4 because they do not clearly point out the patentable novelty which he or she thinks the
5 claims present in view of the state of the art disclosed by the references cited or the
6 objections made. Further, they do not show how the amendments avoid such
7 references or objections.

8
9 (v) *Applicant asserts that McManis contains no teaching or suggestion of the*
10 *limitation wherein the loader program is further arranged to verify the digital signature of*
11 *the at least one administrator-configurable file using the private key and does not*
12 *disclose an administrator-configurable file." Thus, it is respectfully submitted that claims*
13 *5, 6, and 11 are allowable over the prior art of record (Remarks, page 13, par. 4).*

14
15 In response, Applicant's arguments fail to comply with 37 CFR 1.111(b) because
16 they amount to a general allegation that the claims define a patentable invention without
17 specifically pointing out how the language of the claims patentably distinguishes them
18 from the references.

19
20 (vi) *Applicant asserts that McManis does not disclose or suggest a Virtual*
21 *Machine software installation, as found in claims 6 and 12. It is respectfully submitted*
22 *that the amendment of Claims 6 and 12 does not introduce new matter and respectfully*

1 *requested that the Patent Office withdraw its rejection of these claims under 35 U.S.C.*
2 *103(a) (Remarks, page 14, par. 2).*

3
4 In response to applicant's arguments against the references individually, one
5 cannot show nonobviousness by attacking references individually where the rejections
6 are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208
7 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir.
8 1986).

9
10 (vii) *McManis is not concerned with the basic software but with certain called*
11 *routines and so it not concerned with the initial loading of a base application, such as a*
12 *JVM. Thus, **the combination of McManis and Menezes do not make claims 3 and 9***
13 ***are allowable** because of their dependence from allowable base claim 1 and allowable*
14 *intervening claim 2 and allowable base claim 7 and allowable intervening claim 8,*
15 *respectively (Remarks, page 15, par. 1; emphasis added).*

16
17 It is assumed that the applicant meant to say that the combination of prior art
18 does not read upon claims 3 and 9 because claims 3 and 9 depend upon an
19 "allowable". In response, In response to applicant's argument that the references fail to
20 show certain features of applicant's invention, it is noted that the features upon which
21 applicant relies (i.e., *the initial loading of a base application, such as a JVM.*) are not
22 recited in the rejected claim(s). Although the claims are interpreted in light of the

1 specification, limitations from the specification are not read into the claims. See *In re*
2 *Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

3 Furthermore, Applicant's arguments fail to comply with 37 CFR 1.111(b) because
4 they amount to a general allegation that the claims define a patentable invention without
5 specifically pointing out how the language of the claims patentably distinguishes them
6 from the references.

7
8 (viii) *Both McManis and Menezes are silent regarding a hidden public key and*
9 *neither disclose or suggest the limitation "the loader program being arranged to use the*
10 *hidden public key in the event that a public key cannot be obtained from the internet".*
11 *Furthermore, McManis' discloses an embedded public key, but does not suggest or*
12 *disclose both a hidden public key and a public key obtained via the internet. Thus,*
13 *claims 4 and 10 are allowable for this additional reason (Remarks, page 15, par. 4 –*
14 *page 16).*

15
16 In response, the examiner points out that claims 4 and 10 stand rejected under
17 35 U.S.C. 112, second paragraph for a lack of antecedent basis for "the internet".
18 Furthermore, claims 4 and 10 stand rejected for the reasons of record.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffery Williams whose telephone number is (571) 272-7965. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Emmanuel Moise can be reached on (571) 272-3865. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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1 Information regarding the status of an application may be obtained from the
2 Patent Application Information Retrieval (PAIR) system. Status information for
3 published applications may be obtained from either Private PAIR or Public PAIR.
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5 For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should
6 you have questions on access to the Private PAIR system, contact the Electronic
7 Business Center (EBC) at 866-217-9197 (toll-free).

8
9
10 Jeffery Williams
11 Assistant Examiner
12 Art Unit 2137

13
14 


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